WE CLAIM:

1. A pharmaceutical composition comprising a nucleic acid molecule encoding an Ebola virus structural gene product operatively-liked to a control sequence, in a pharmaceutically acceptable carrier.

2. The pharmaceutical composition of Claim 1, wherein the Ebola virus structural gene product is selected from the group consisting of the transmembrane form of virus glycoprotein, the secreted form of virus glycoprotein, virus nucleoprotein and combinations thereof.

3. The pharmaceutical composition of Claim 1, wherein the control sequence is a promoter.

4. The pharmaceutical composition of Claim 3, wherein the promoter is the CMV immediate-early region 1 promoter.

5. The pharmaceutical composition of Claim 1, further comprising an adjuvant.

6. The pharmaceutical composition of Claim 2, wherein the structural gene product is the transmembrane form of virus glycoprotein.

7. The pharmaceutical composition of Claim 2, wherein the structural gene product is the secreted form of virus glycoprotein.

8. The pharmaceutical composition of Claim 2, wherein the structural gene product is virus nucleoprotein.

9. A method of producing a vaccine against disease caused by infection by Ebola virus, comprising the steps of:

a) administering the pharmaceutical composition of Claim 1 to a test host to determine an amount and a frequency of administration thereof to elicit a protective immune response in said host; and

b) formulating said pharmaceutical composition in a form suitable for administration to a treatable host in accordance with said determined amount and frequency of administration.

10. A vaccine comprising a nucleic acid molecule encoding the transmembrane form of the Ebola virus glycoprotein operatively-linked to a control sequence, in a pharmaceutically acceptable carrier.

11. The vaccine of Claim 10, wherein the control sequence is a promoter.

12. The vaccine of Claim 11, wherein the promoter is the CMV immediate-early region 1 promoter.

13. The vaccine of Claim 10, further comprising an adjuvant.

14. A vaccine comprising a nucleic acid molecule encoding the secreted form of the Ebola virus glycoprotein operatively-linked to a control sequence, in a pharmaceutically acceptable carrier.

15. The vaccine of Claim 14, wherein the control sequence is a promoter.

16. The vaccine of Claim 15, wherein the promoter is the CMV immediate-early region 1 promoter.

17. The vaccine of Claim 14, further comprising an adjuvant.

18. A vaccine comprising a nucleic acid molecule encoding the Ebola virus nucleoprotein operatively-linked to a control sequence, in a pharmaceutically acceptable carrier.

19. The vaccine of Claim 18, wherein the control sequence is a promoter.

20. The vaccine of Claim 19, wherein the promoter is the CMV immediate-early region 1 promoter.

21. The vaccine of Claim 18, further comprising an adjuvant.

22. A method of immunizing a subject against hemorrhagic fever comprising the step of administering to the host an immunoeffective amount of the vaccine of any of Claims 10 to 21.

23. The method of Claim 22, wherein the hemorrhagic fever is caused by infection with Ebola virus.

24. The method of Claim 22, wherein the hemorrhagic fever is caused by infection with Marburg virus.

25. The method of Claim 22, wherein the host is a human and administration is by intramuscular injection.

26. The method of Claim 22, wherein the subject receives a second administration of an immunoeffective amount of a vaccine against disease caused by infection by Ebola virus or Marburg virus.